

Soda Bottle Lab

Day 1

1. Cut and assemble bottles as shown on back (draw lines first, then cut with scissors).
2. Add sand, water, and dechlorinator. Record what you put in each chamber and how much (measured or weighed) while assembling your column.
3. Decide on additional material to bring to class tomorrow:

Leaves (no lettuce!)

Banana peel

Grass

Apple core

Optional materials you may choose to use in your column:

More aquatic animals (e.g., guppies, shrimp, snails, fiddler crabs)

More insects (e.g., ants, crickets, mealworms)

Algae or other aquatic plants

More terrestrial animals (e. g., lizard, frog, toad, snails)

Aquarium rock

Potato

Soil from your own yard

4. Write your three hypothesis...one for each chamber (see below).

Day 2

1. Add soil, fish, snails, worms, fruit flies, plants as diagramed on back. Be sure to measure and record all amounts.
2. Add precipitation to the column once it is assembled. (Be sure to measure and record your “rain” volume.) Throughout the data collection period, you may add precipitation, but again be sure to record the dates and quantity.
3. Label and place your column near the windows.
4. The final project is due **Friday, Oct. 16.**

Title:

Purpose:

Hypothesis for each chamber:

1. Terrestrial chamber:

2. Decomposition chamber:

3. Aquatic chamber:

Labeled diagram of column:

Diagram has a title, which tells the reader what the drawing is. It reveals the setup of the column (the abiotic or nonliving factors like the bottle arrangement, hole arrangement in bottle caps, location of straw, etc.) It also labels the key biotic or living features (the contents of the aquatic chamber, decomposition chamber, terrestrial chamber).

Cycles:

Draw three cycles that apply to YOUR ecosystem (Water, Carbon, Nitrogen-pgs 75, 77, 78). Hint: if your column does not have fossil fuels in it, they should not appear on your Carbon cycle, even if they are in the book. Be specific to the plants and animals you have in your column.

Food web/chain:

Draw a food web or a food chain for the organisms in your column.

Data table:

Terrestrial chamber

Beginning level/amount of _____:

Ending level/amount of _____:

Decomposition chamber

Beginning level/amount of _____:

Ending level/amount of _____:

Aquatic chamber

Beginning level/amount of _____:

Ending level/amount of _____:

Conclusion: see “Guidelines for Biology Lab Report” in your syllabus.

